**Worksheet 2.1A: Categorical Variables practice**

In a survey of adult Americans, people were asked to indicate their **age** and to categorize their **political preference** (liberal, moderate, conservative). The results are as follows:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Liberal | Moderate | Conservative | *Total* |
| under 30 | 83 | 140 | 73 | *296* |
| 30 - 50 | 119 | 280 | 161 | *560* |
| over 50 | 88 | 284 | 214 | *586* |
| *total* | *290* | *704* | *448* | *1442* |

1. What is the row variable?
2. What is the column variable?
3. Calculate the ***marginal distribution*** for the ***AGE variable***. Write these down. Then make a bar graph of the marginal distribution for age.
4. Calculate the ***marginal distribution*** for the ***POLITICAL PREFERENCE variable***. Write these down. Then make a bar graph of this marginal distribution.
5. What percent of the people are Liberals?
6. Of the Liberals, what percent are under 30?
7. What percent of people are over 50?
8. Of those over 50, what percent are Liberals?
9. Of those that are moderates, what percent are 30-50?
10. What percent of respondents are moderate ***and*** under 30?
11. Given that someone is a moderate, what is the chance they are over 50?
12. What percent of people are conservative ***and*** 30 – 50?

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